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Country: Italy

Titel of the project: The prevention of Stroke in the 3rd Millennium

## Project details

### **Tiziana Tassinari**

ASL2 savonese Ospedale Santa Corona

Award amount: €100,000

Create a web application that can be used to screen people potentially at risk of Stroke. Build a set of data and compare it with the mortality and health condition data of the regions involved Promote awareness of the risk factors amongst the general public

Objectives: create a multi-level web framework for the primary prevention of stroke and regional multi-target monitoring, based on on-line communication tools such as social networks and semantic web. The system will consist of a mash up of Web2. 0 tools and will function on-line both as a sensitization tool and as a reliable point of reference and data collection. The framework will be articulated through multiple modes of communication relating to the profiles of target users that will be analysed:1) A first "social community" layer (multi-target by sex and age), dedicated to promoting awareness of the variable risk factors of the stroke and the communication strategies for establishing an effective primary prevention. Multimedia assets and innovative methodologies (serious games) shall be used in this level.2) An intermediate layer "NON PROFIT SCIENTIFIC HELPDESK", creating a specific "online common interest community" on the theme of stroke prevention and establishing a reliable and approved channel of communication between patients, carers and medical and health professionals;3) A Core Layer for the regional monitoring of ONLINE PREVENTION, designed to host software applications and online surveys/questionnaires specific to the project that allow data to be gathered on the people already under the responsibility of the health institutes (regional monitoring) or on new at risk people; the data gathered will be correlated with other epidemiological datasets, e.g. the "Health Conditions of Ligurians" report. The questionnaire form that will be used to gather the data must ensure scientific reliability and communicative efficiency: for this reason it will be based on an questionnaire evaluating the risk factors organized into 17 items (true or false questions) subdivided into categories (lifestyle, age, sex, race, BMI, arterial pressure, physical activity, family history, medical history) specific to TIA, stroke etc.. Each patient/user that registers online (progressing from the first "communicative" level to the second community level) will be able to access the system using their unique tax code. They will then be permitted to access sessions repeatedly and the chronology and the quality of the data gathered will be managed automatically. Through an automatic pre-evaluation in real time, the system will monitor any eventual critical responses (user at risk state) and will securely signal the user to the medical staff at the Neurology Unit at Ospedale Santa Corona di Pietra Ligure (Savona). No automated response will be issued to the user until the data has been verified by medical personnel: in the event that the user at risk is not a resident in that region, the health institution nearest to the user's residence will be contacted. In order to test this approach an initial trial of the Core Layer was conducted (HTTP://WWW.NOSTROKE.ORG/PREVICTUS/TRIAL.PHP). Three different risk thresholds have been considered: "Low" when positive responses to critical questions are <= 5, "Medium" for positive values between 6 and 9, "High" for positive values > 9. A further study aims to sample the population of Finale Ligure (Savona) (age group 45-54), who will be presented with the questionnaire. Cases at Medium or High risk will be immediately identified to the medical staff. Finally all data gathered will be processed and aggregated to produce reports to be published.

# **Audience**

## **Type**

- · Healthcare professionals
- General public

#### Location

Italy, Europe